

Title (en)

FLAME STABILIZED MIXER-EDUCTOR-OXIDIZER FOR HIGH TEMPERATURE FUEL CELLS

Title (de)

MISCHER/SAUGSTRAHLOXIDIERER MIT STABILISIERTER FLAMME FÜR HOCHTEMPERATUR-BRENNSTOFFZELLEN

Title (fr)

MÉLANGEUR-ÉJECTEUR-OXYDANT À STABILISATION DE FLAMME POUR PILES À COMBUSTIBLE À HAUTE TEMPÉRATURE

Publication

EP 2901519 A4 20160518 (EN)

Application

EP 13842270 A 20130927

Priority

- US 201213630810 A 20120928
- US 2013062232 W 20130927

Abstract (en)

[origin: US2014093798A1] A mixer/eductor assembly for use with a fuel cell stack having an anode-side and a cathode-side, said mixer/eductor assembly mixing and at least partially combusting anode exhaust gas output from the anode-side and an oxidant supply gas, said mixer/eductor assembly comprising: a first area receiving and mixing a first portion of the anode exhaust gas and a first portion of the oxidant supply gas to form a first mixture, the first area being configured so as to initiate a combustion reaction in the first mixture; a second area coupled with the first area, the second area receiving and mixing a second portion of the anode exhaust gas and a second portion of the oxidant supply gas to form a second mixture, wherein: the first mixture has a predetermined oxidant to fuel ratio smaller than the oxidant to fuel ratio of the second mixture; and the first area provides an ignition source to promote continuous combustion of the second mixture in the second area.

IPC 8 full level

H01M 8/04014 (2016.01); **H01M 8/04089** (2016.01); **H01M 8/04746** (2016.01); **H01M 8/0662** (2016.01); **H01M 8/12** (2006.01)

CPC (source: EP US)

H01M 8/04022 (2013.01 - EP US); **H01M 8/04097** (2013.01 - EP US); **H01M 8/04776** (2013.01 - EP US); **H01M 8/0662** (2013.01 - EP US); **H01M 8/06** (2013.01 - US); **H01M 8/12** (2013.01 - EP US); **H01M 8/18** (2013.01 - US); **Y02E 60/50** (2013.01 - EP US)

Citation (search report)

- [YD] WO 2005081709 A2 20050909 - FUELCELL ENERGY INC [US]
- [Y] US 2002155331 A1 20021024 - KAMEGAYA SHIGERU [JP], et al
- [Y] JP 2002151128 A 20020524 - NISSAN MOTOR
- See references of WO 2014052784A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 2014093798 A1 20140403; **US 9190676 B2 20151117**; EP 2901519 A1 20150805; EP 2901519 A4 20160518; EP 2901519 B1 20180228; KR 101750636 B1 20170623; KR 20150063096 A 20150608; US 10312531 B2 20190604; US 2016064749 A1 20160303; WO 2014052784 A1 20140403; WO 2014052784 A8 20150416; WO 2014052784 A8 20150528

DOCDB simple family (application)

US 201213630810 A 20120928; EP 13842270 A 20130927; KR 20157010552 A 20130927; US 2013062232 W 20130927; US 201514939521 A 20151112